United States Army Logistics Transformation Agency

Common Logistics Operating Environment

Decision Briefing for:
LTG Christianson
16 Aug 04

Logistics Transformation Agency
(717) 770-7600

Purpose

- **Describe Scope of an Expanded CLOE ($CLOE_{EX}$)**
- **Obtain Approval on the Scope of $CLOE_{EX}$**
- **Obtain Approval for development of a Joint ICD working with the J4, G-4 Staffs and TRADOC / CASCOM ICT**
  - **Requires a FAA, FNA & FSA to be developed**

Agenda

- What Is Driving CLOE $_{EX}$?
- What Is CLOE $_{EX}$? - Vision, Scope, Purpose
- How Do We Accomplish CLOE $_{EX}$?
  - Engineering Models & Architecture Products
  - Collaboration With PEOs & PMs
  - Incorporate Joint Operating & Functional Concepts
- Program Methodology & Core Competencies
- Schedule
- Recommendations
- Guidance

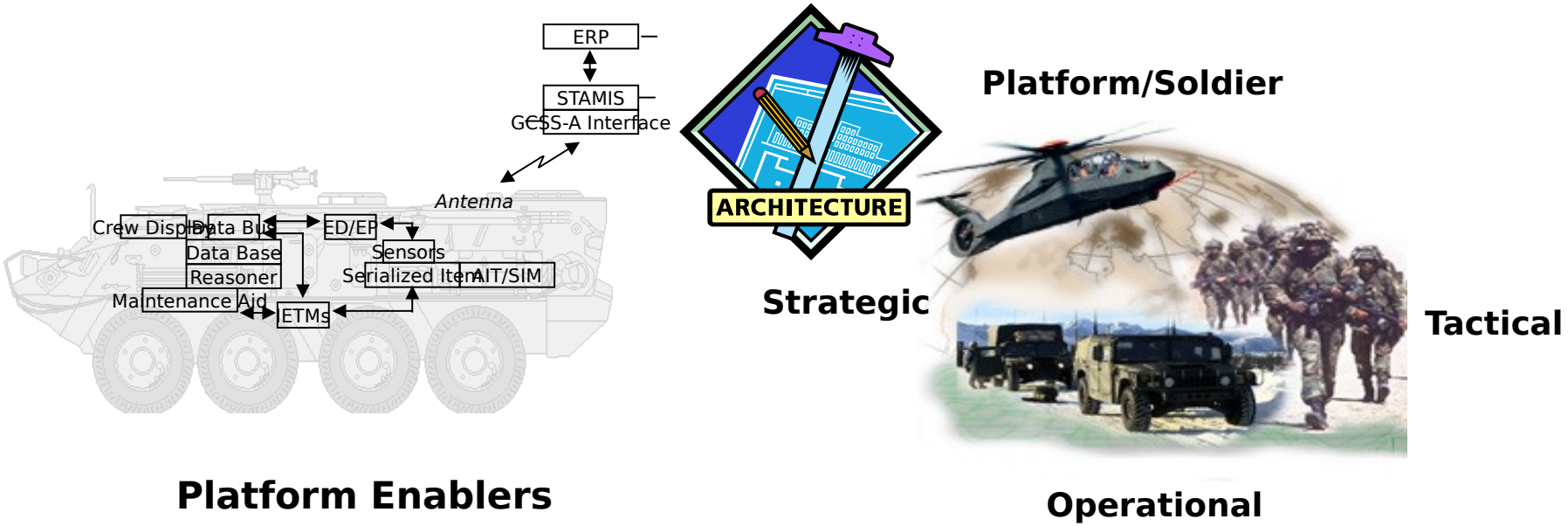
What Is Driving $CLOE_{EX}$?

- **G-4 Direction**
  - **A Need For A Single Overarching Logistics Architecture**
- **Evolving Joint / JCIDS / DODAF Requirements**
- **Transition To Modularity May Create Gaps In The Logistics Processes**
- **Need For A Common Logistics Operating Picture At the Tactical, Operational, & Strategic Levels**
- **Interoperability Of Current To Future Force**

$CLOE_{EX}$ Vision

Vision: An overarching integrated logistics architecture that fuses information, logistic processes, and sensor-based technologies to support tactical, operational, and strategic sustainment levels which operates in a *Joint Integrated Logistics Environment*.

AS IS → **Transformation** → **TO BE**

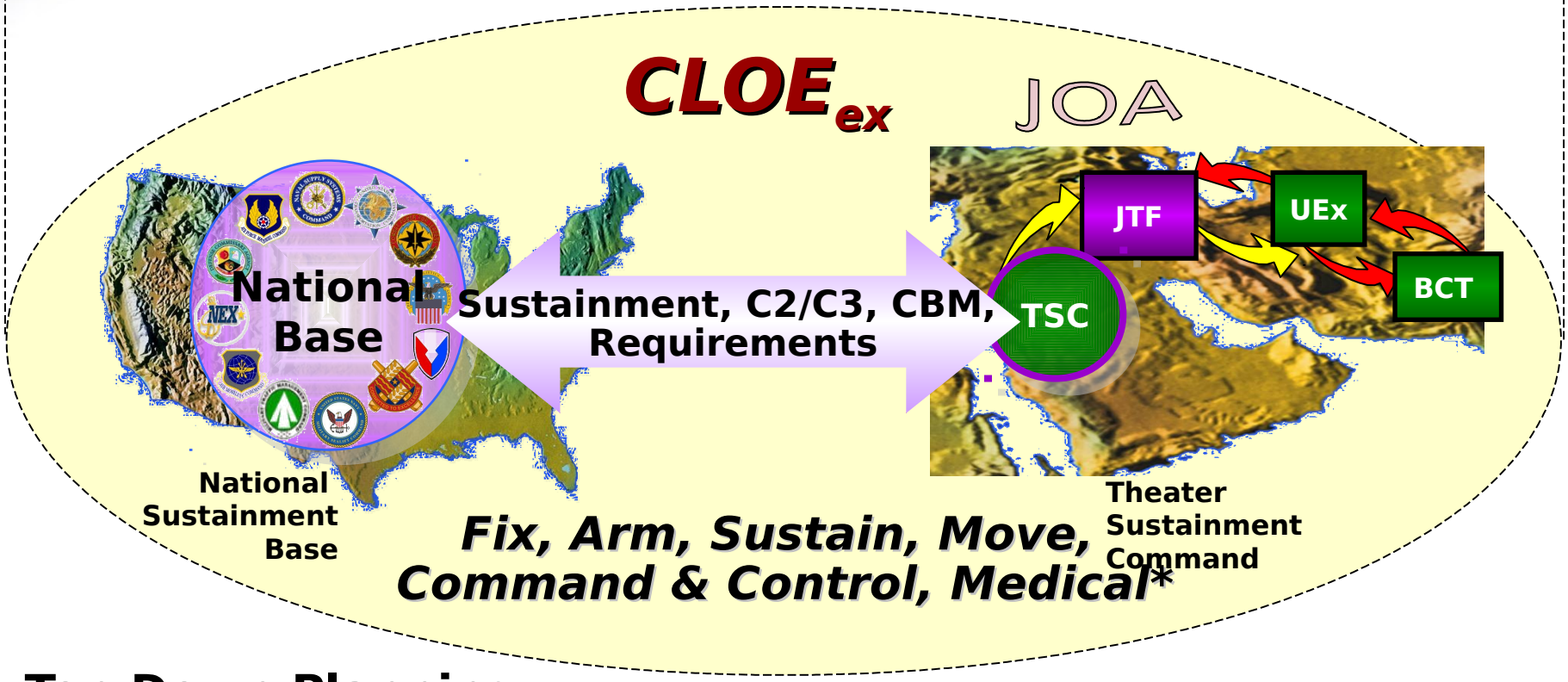


Scope: $CLOE_{EX}$ Overarching Logistics Architecture

Strategic — National

Operational — Theater/UEy

Tactical — UEx / BCT



Top Down Planning

Bottom Up Build – Soldier/Platform Driven

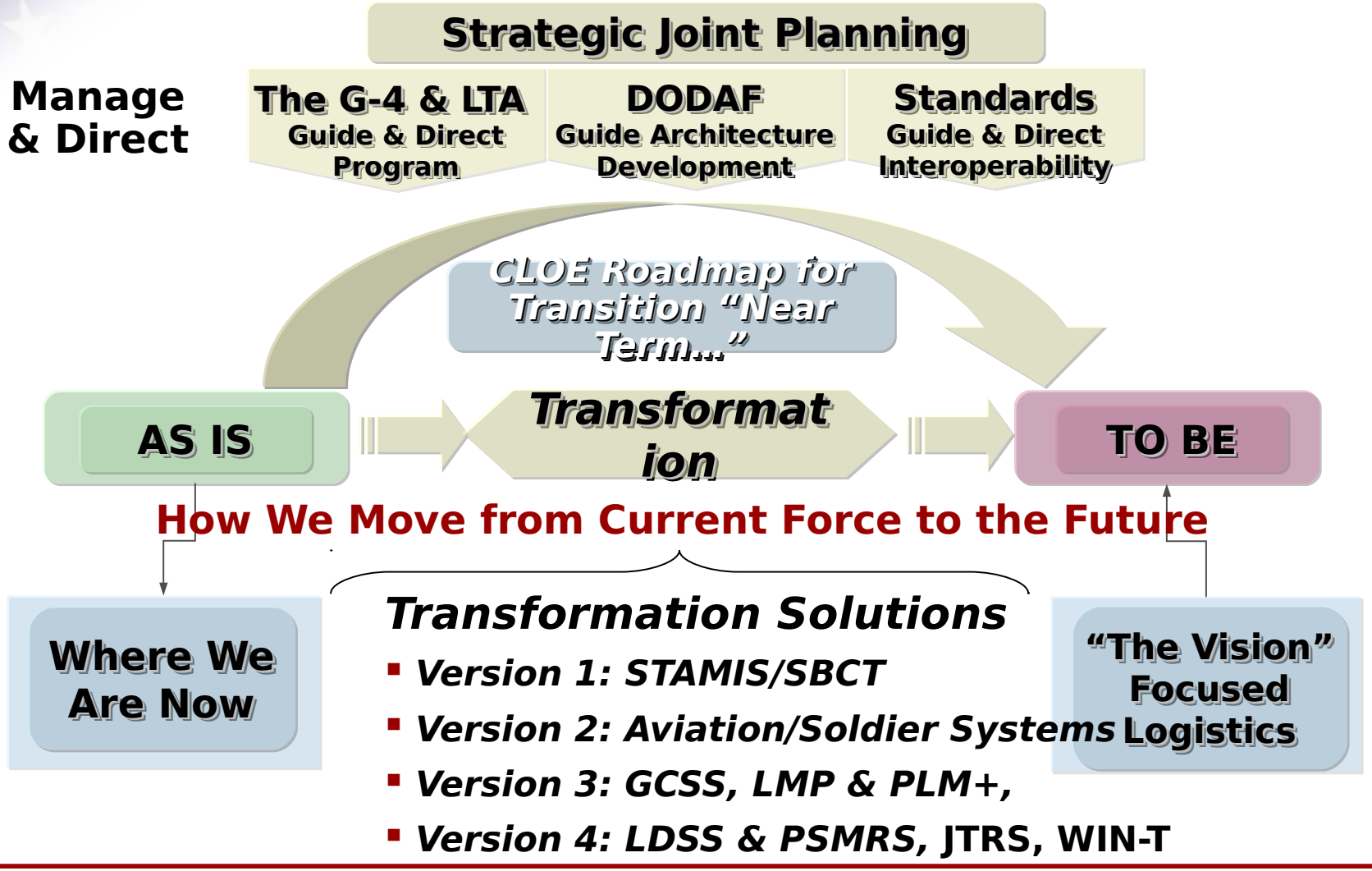
*Will feed data to medical systems

CLOE Architecture – OV & TV Purpose & Scope

- **Purpose: Establish anticipated functional information exchanges**
  - **Required between geographically separate elements**
  - **Enable delivery of maintenance and logistic services**
  - **In support of deployed operations (Joint/Combined)**
  - **Across full range of military combat operations in a *Theater/Joint Area of Operations***
- **Scope: Mandatory and Supporting Architecture Products – Tactical, Operational, Strategic**
  - **Business Processes, Doctrine, Organizational Structure, Information Exchange Matrix - Operational Views (OVs)**
  - **Common Standards, Interfaces, Protocols, Middleware, Data Standards - Technical Views (TVs)**

$CLOE_{EX}$ Path Forward – Logistics Transformation

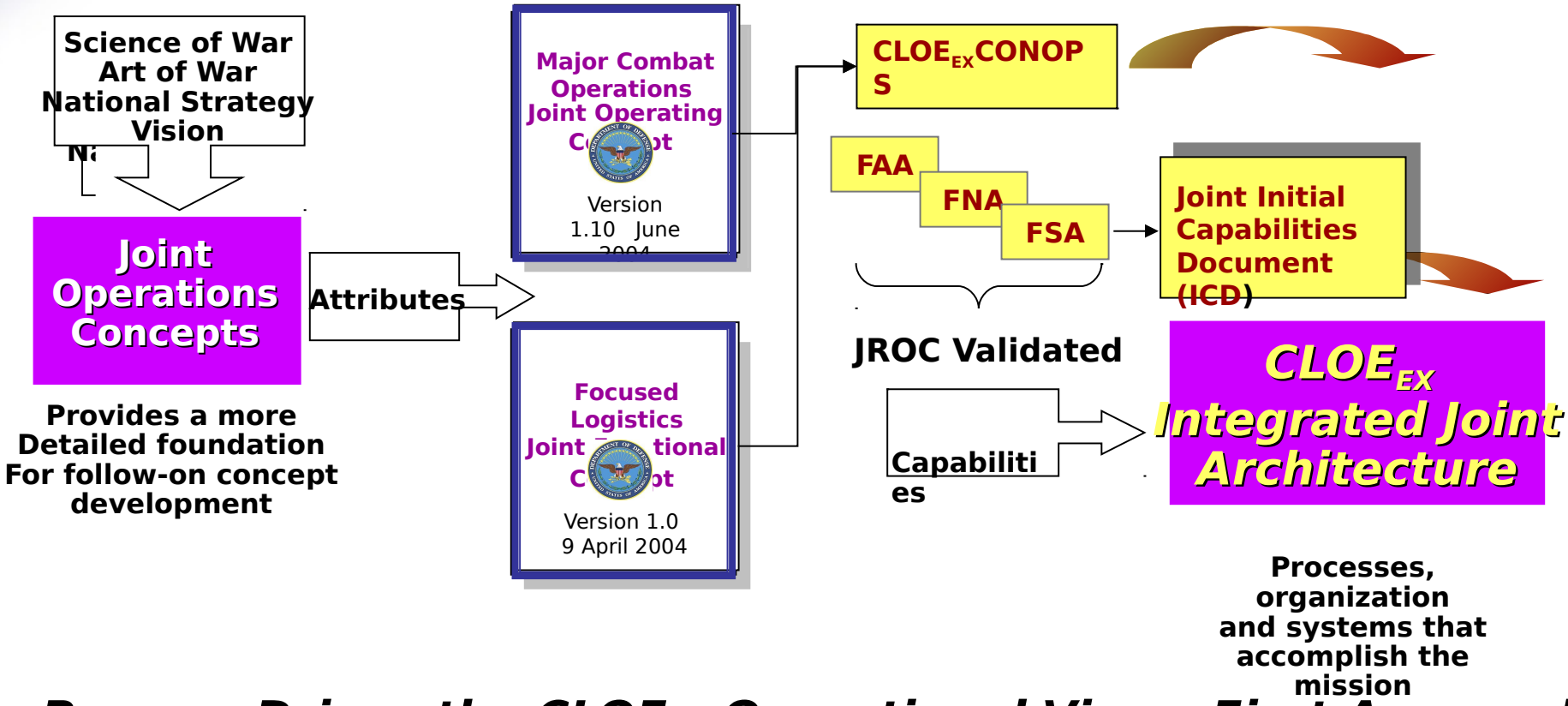
A Joint Integrated Overarching Logistics Architecture



How Do We Accomplish This?

From Concept To Architecture

Born Joint



This Process Drives the CLOE$_{EX}$ Operational-Views-First Approach

Integrated Concepts & Architectures

Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170

- Mandates Integrated Architectures
- Joint Capabilities Integration And Development System (JCIDS) Implements A Capabilities-based Approach That Utilizes An Integrated Architecture
- Architecture Views Are Mandatory Appendices To ICD, CDD And CPD

Joint Operating Concept Categories

Joint Functional Concepts	***Major Combat Operations***	Homeland Security (NORTHCOM)	Stability Operations	Strategic Deterrence (STRATCOM)
Battlespace Awareness				
Command and Control				
Force Application				
Protection				
Focused Logistics				

Joint Integrated Architectures

- Battlespace Awareness
- Command & Control
- Force Applicatio
- Protection
- Logistics

Implementing The Architecture

Implementation Strategy

CLOE Architecture

Operational (Doctrine)
OV-1, 2, 3, 4, 5, 6a, 7

All Views
AV-1, 2

Technical (Standards)
TV-1, 2

Capabilities Integration & Development System (JCI

Functional Area Analysis → **Functional Needs Analysis** → **Functional Solution Analysis** → **Integrated Concept Document**

CLOE Implementation Guidance to PMs

Hardware Requirements
- Platform
- Ops/ Mgmt Centers
- IT Infrastructure
- Communications

Software Functionality
- Product 1
- Product 2
- …
- Product n

Interface Mechanisms
- Software
- Hardware
- Data Exchange

Technical Standards
- JTA Compliant

Program Methodology & Schedule

Program Methodology – Approach

Top Down Planning Bottom Up Implementation

Plan Top Down

Build Bottom Up

Phase I
Conduct Strategic Assessment

- Joint - JCIDS
  - Focused Logistics
- G-4 Focus Areas
- Modularity – UEy /UEx /BCT
- Current to Future Force

Phase II
Analyze "*As Is*"

- Gap Analysis
- Technology Assessment
- Concept Development (Joint/Army)
  - Tasks
  - Capabilities
  - Attributes
  - Metrics

Phase III
Build "*To Be*" Framework

- Business Case Analysis
- Budget Planning & Submission
- Architecture Planning
- Model *To Be* Projects
- Determine Capabilities
- Life-Cycle Support Planning
- Develop Architecture Products

Phase IV
Develop & Execute Implementation Plan

- Develop / Input into ICD
- Finalize Model *To Be* Projects
- Develop Implementation Plan
- Incorporate Architecture Products into ICD, CDD, & CPD

CLOE Architecture Products

EHMS

Technical standardization - data protocols & interfaces

TV-1 Technical Architecture Profile (Standards)

TV-2 Standards Technology Forecast

Output

S

Sustainment

Strategic

Operational

Tactical

Command Level

Actionable Data…"

S&R Inputs

Situational Awareness Data"

Information requirement

OV-2 Node Connectivity Description

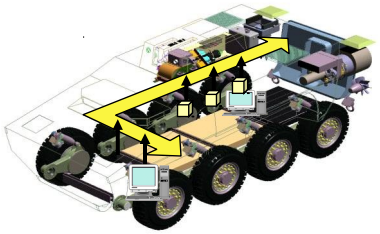
OV-3 Information Exchange Matrix

OV-4 Organizational Relationships Chart

OV-5 Activity Model

Output

s



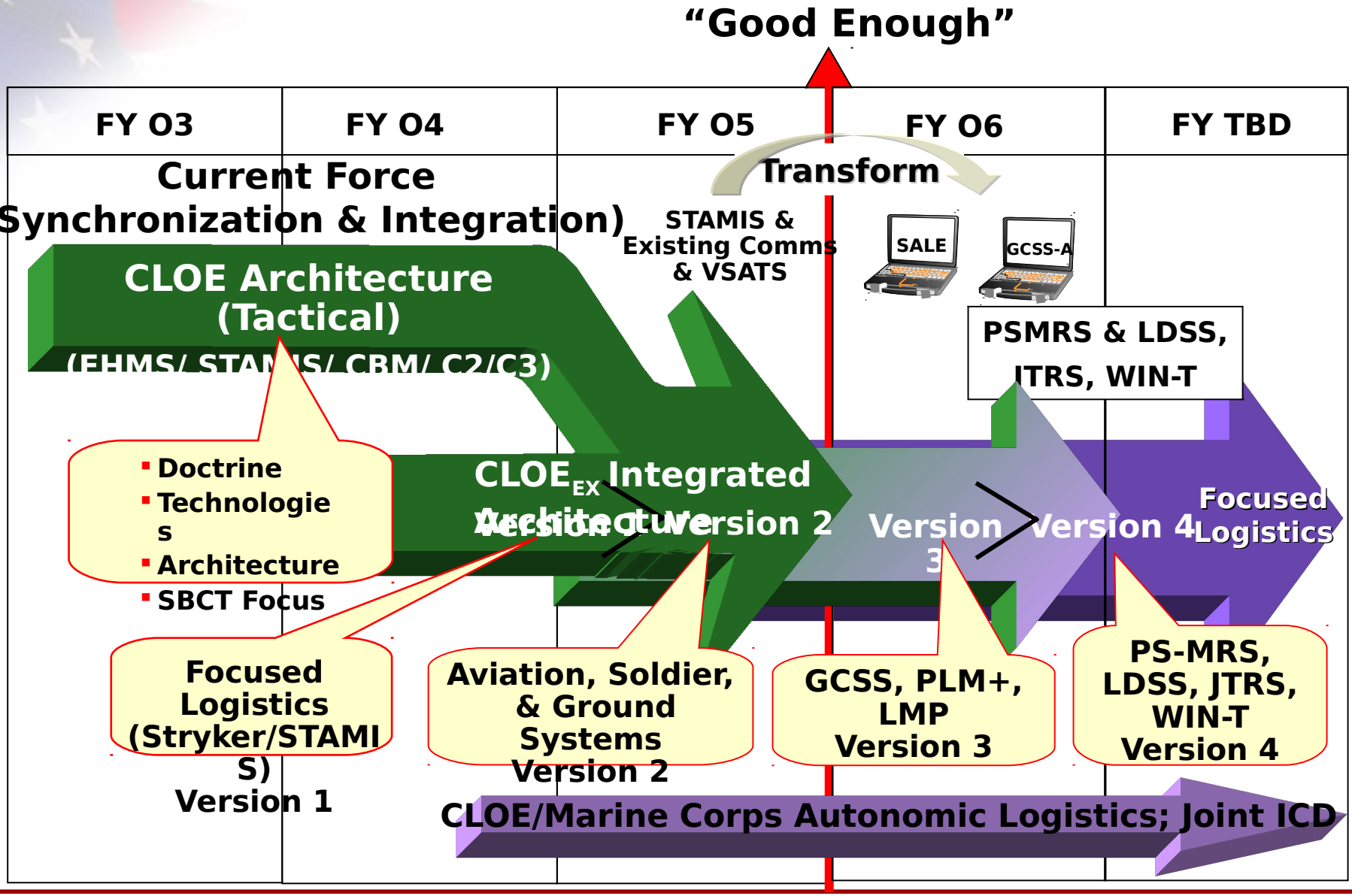
PSMRS/LDSS

Process of transferring information & timescale

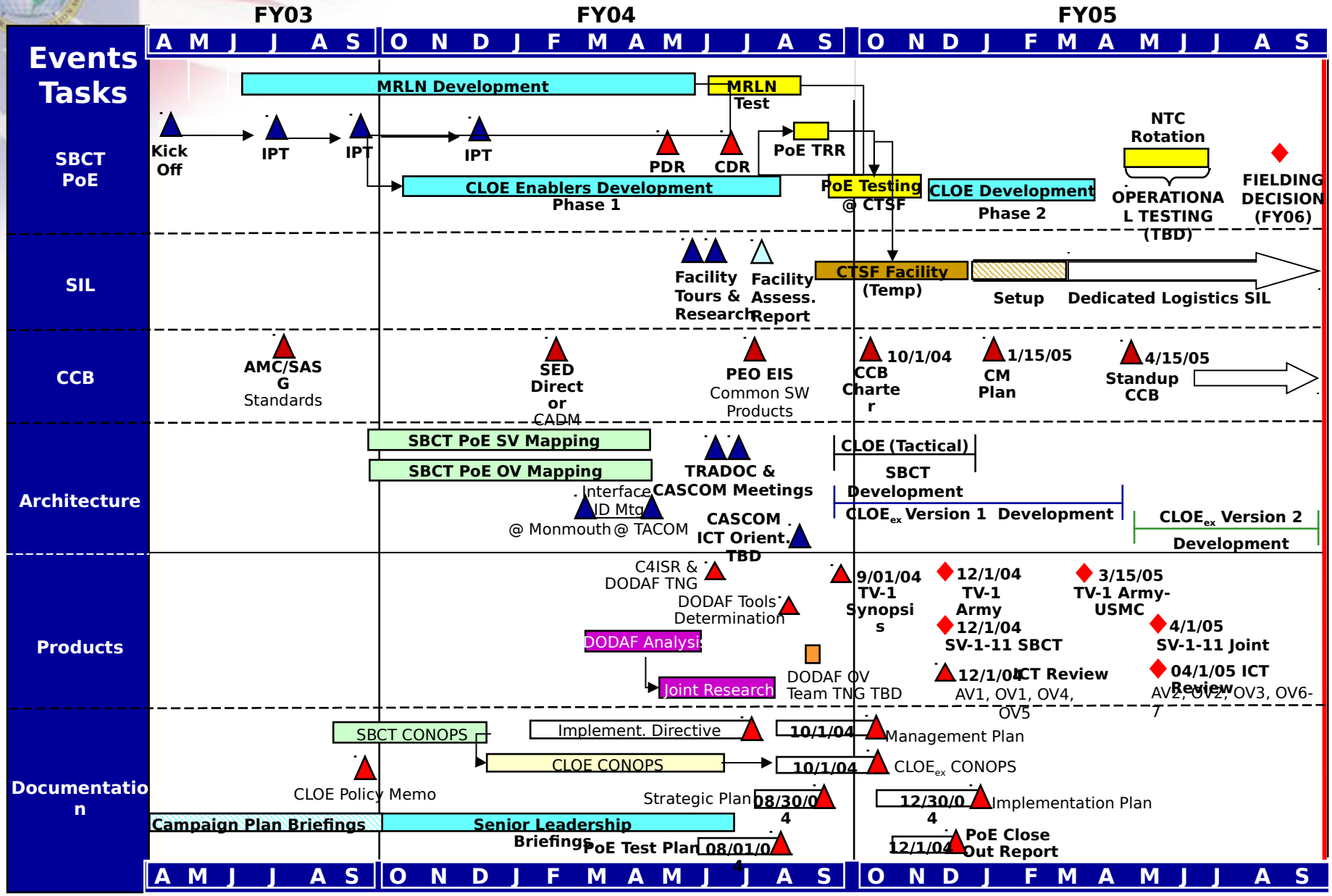
OV-6 Operational Activity Sequence and Timing Descriptions

OV-7 Logical Data Model

Proposed CLOE$_{EX}$ Development



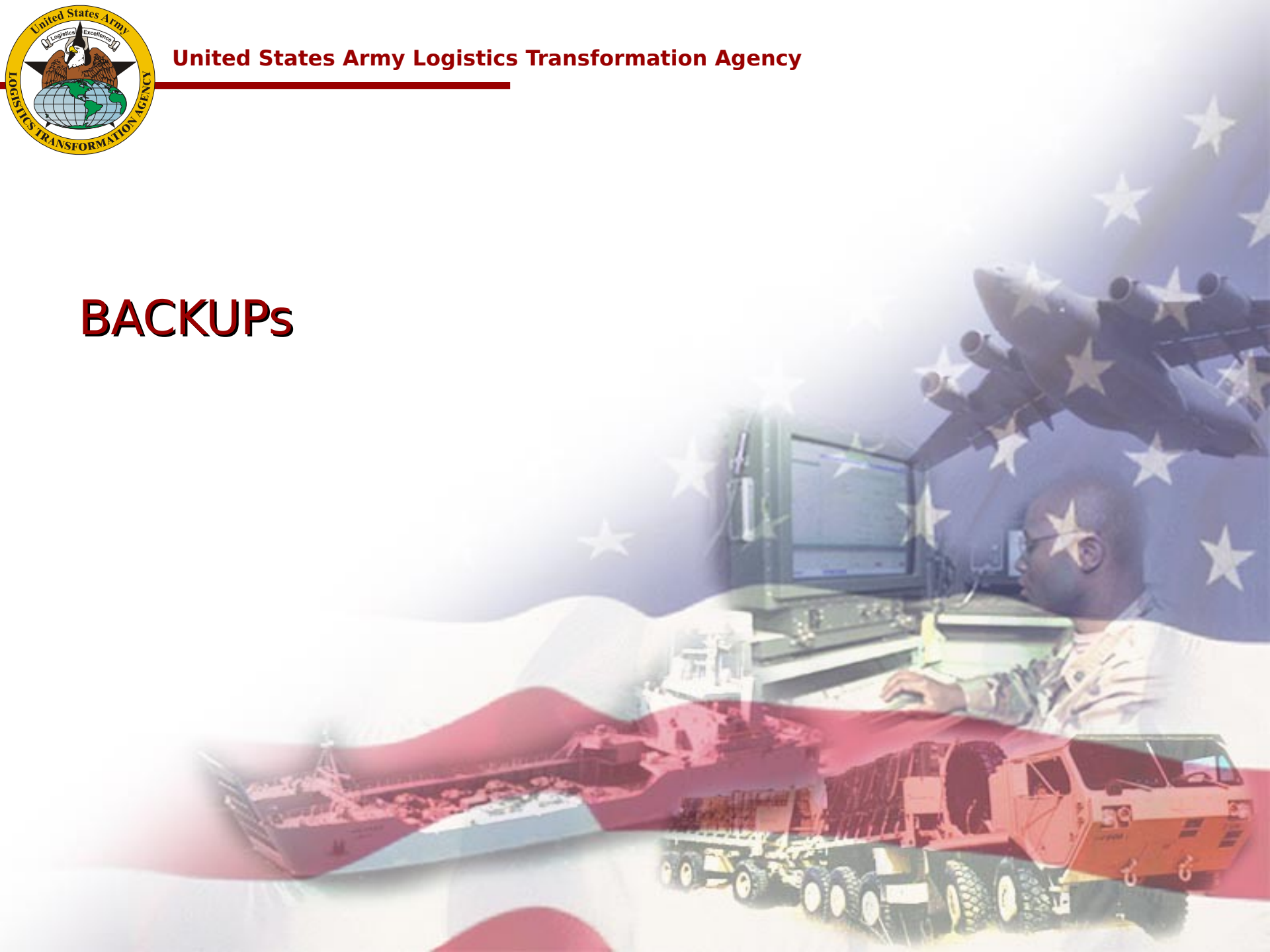
CLOE Near Term Schedule



Recommendations

- **Approve $CLOE_{EX}$ Concept, Scope**
- **Clarify G-4 Architecture Role to Army and Joint Communities**
  - **Policy Letter from VCSA designating G-4 Lead**
  - **Rewrite Army Knowledge Memorandum (AKM 4)**
- **Approve Development of a Joint ICD**

BACKUPs



Vision Drill Down – Principles, Objectives, Attributes

Vision: *"An overarching integrated logistics architecture that fuses information, logistic processes, and platform embedded sensor-based technologies to support tactical, operational and strategic sustainment levels which operates in a Joint Integrated Logistics Environment."*

Principles (6)

Maximize warfighting effectiveness at the Tactical Level	Provide data for global view of required Tactical & Operational sustainment support	Optimize Communication Processes	Flexibility to adapt to changing technology environment	Streamline the logistics footprint	Transform maintenance and sustainment operations into an integral component of the Enterprise Integration

Objectives (4)

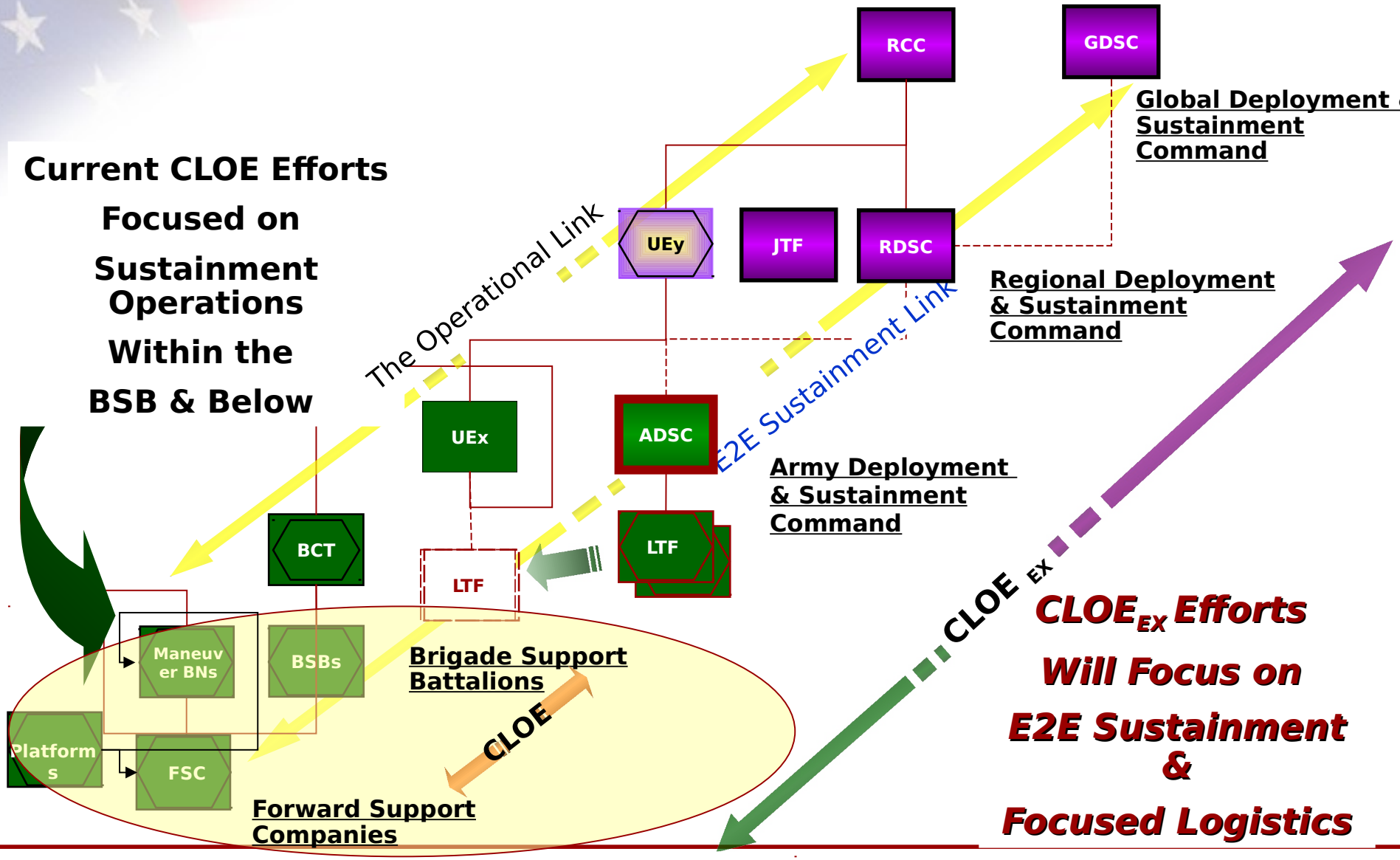
• Commonly defined set of platform data standards	• Provide logistics data to the command and control systems	• Provide timely, accurate & reliable data to support UA sustainment operations	• Ensure equipment health management provides data to support Army-wide end to end data applications

Attributes (3)

Real-time	Automated	Interface to BCS3

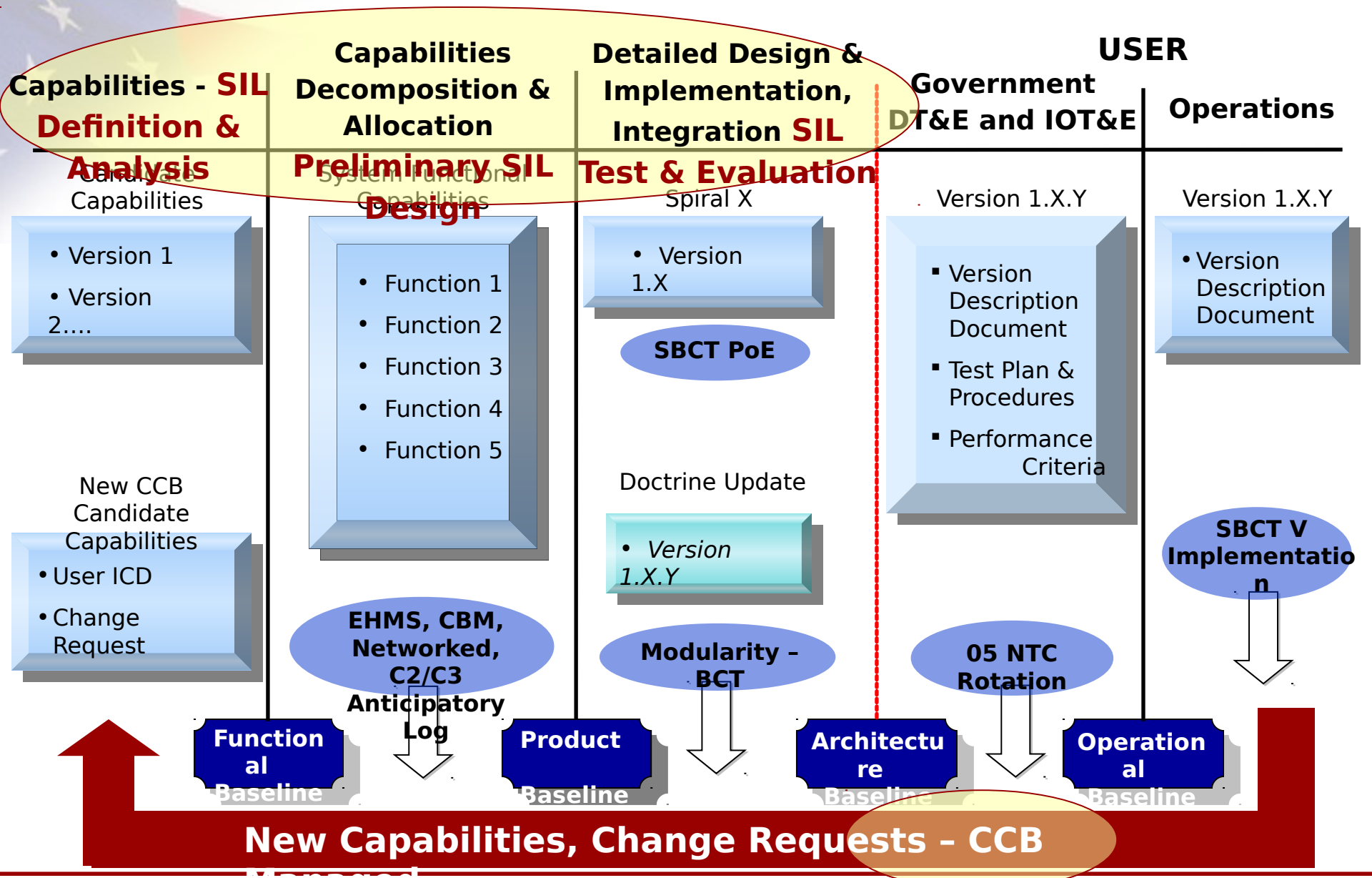
CLOE As Part Of A Joint Team

Current CLOE Efforts Focused on Sustainment Operations Within the BSB & Below



$CLOE_{EX}$ Efforts Will Focus on E2E Sustainment & Focused Logistics

CLOE Capabilities Process – SIL & CCB



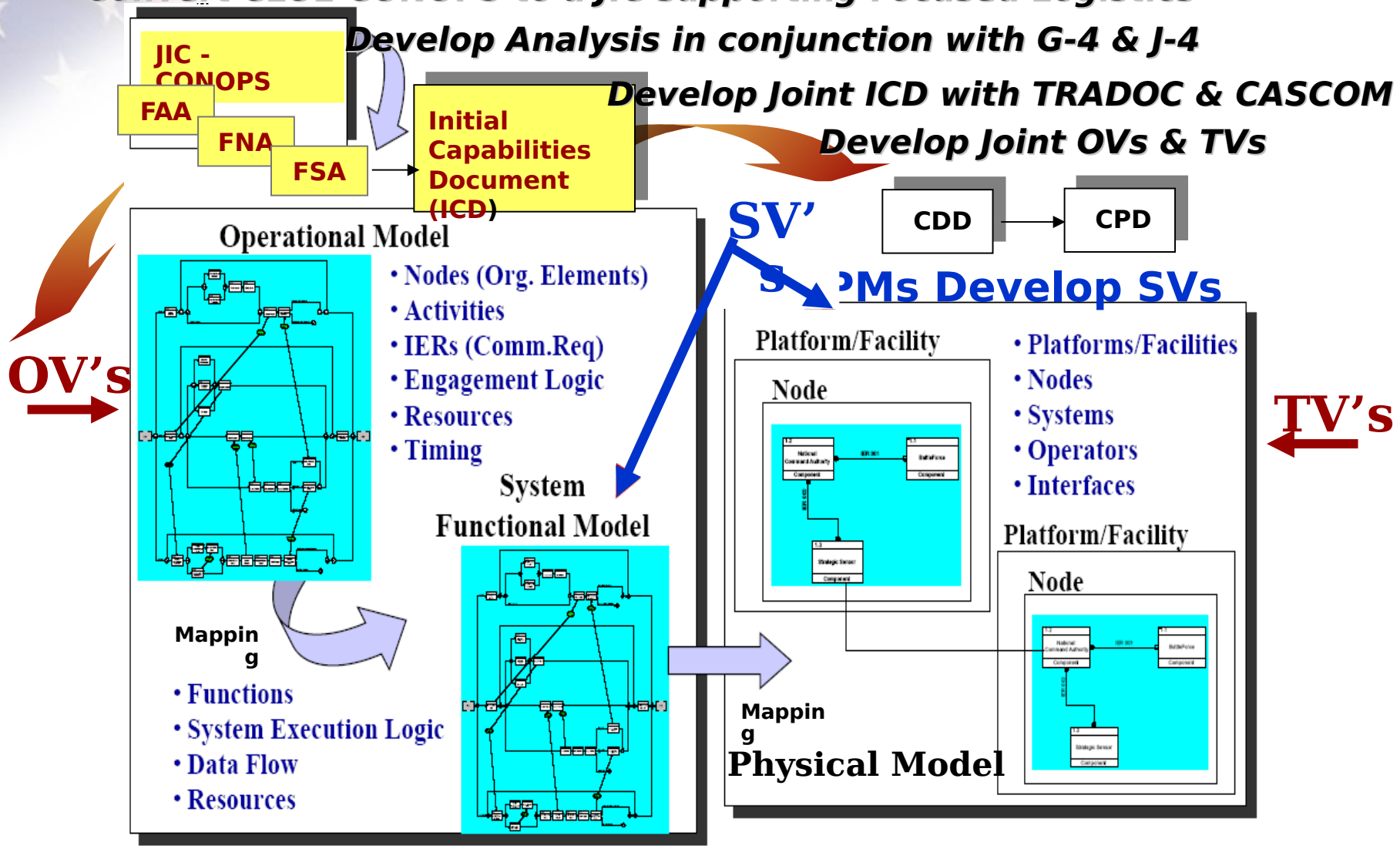
Approving CLOE's Role in Army Modeling & Architecture Product Development – OV & TV

Convert CLOE CONOPS to a JIC supporting Focused Logistics

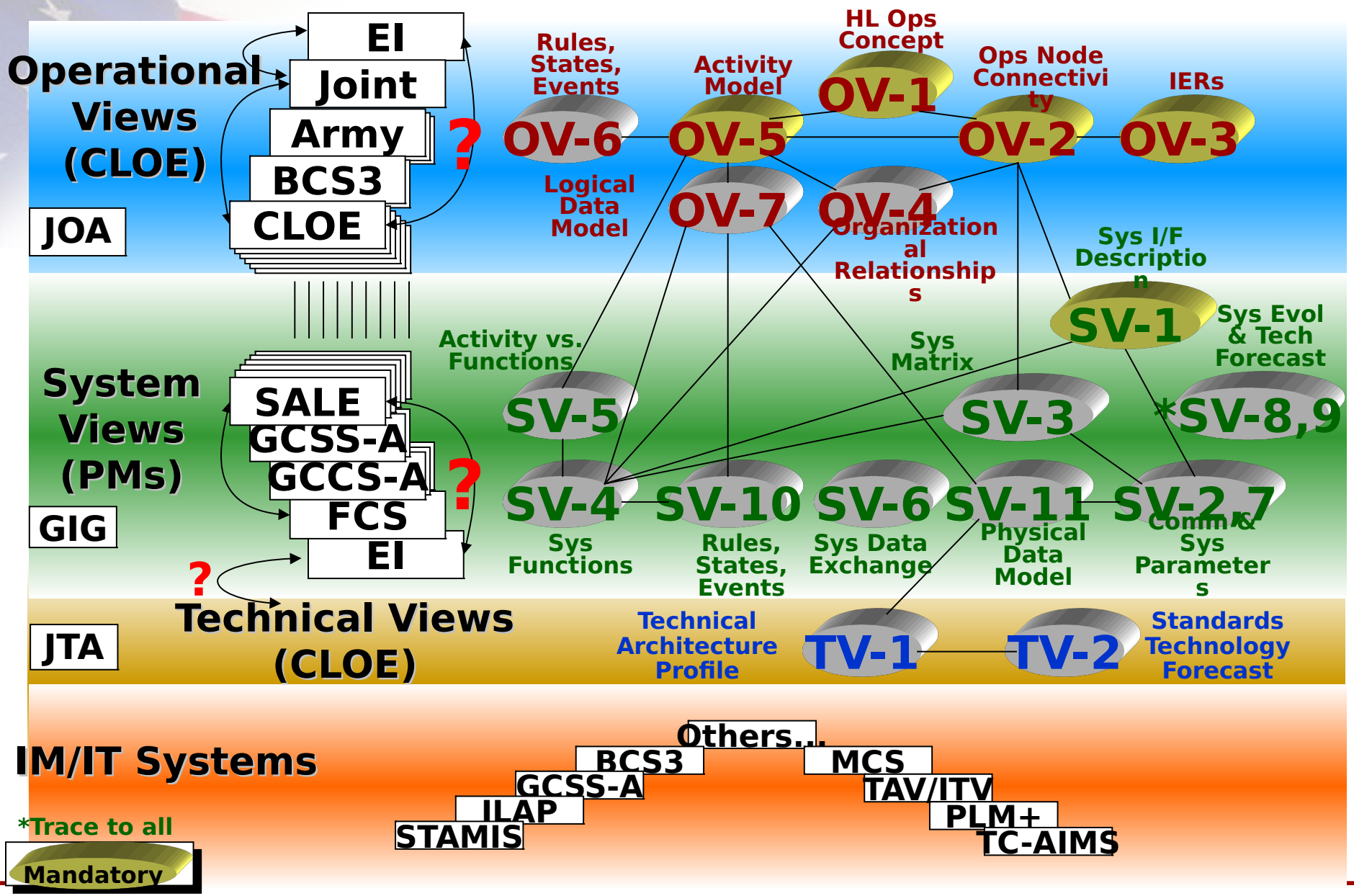
Develop Analysis in conjunction with G-4 & J-4

Develop Joint ICD with TRADOC & CASCOM

Develop Joint OVs & TVs



Joint Integrated Logistics Architecture



The Building Blocks to Accomplish Networked Logistics & Net-Centric Platforms

OV-1

ConOps

OV- 4

ICD

OV-5

OV-3

OV-2

TV-1

TV-2

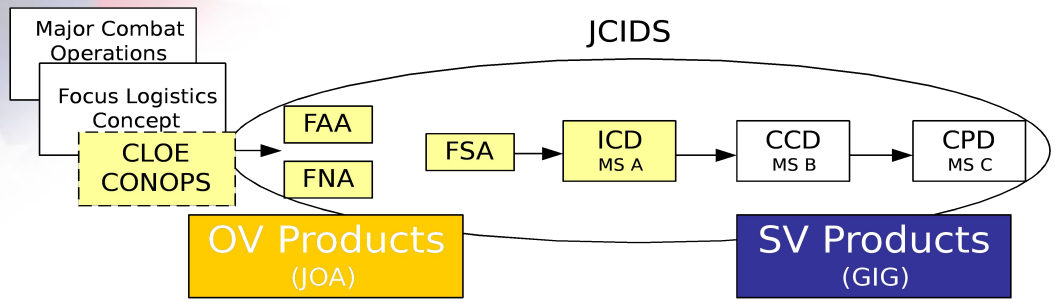
OV-3

OV-7

OV-6c

Note: There is mapping between Architecture Products not shown here

Defining Roles



CLOE - OVs & TVs; CONOPS; Operational Model; ICD

AMC & PMS - SVs; Functional & Physical Models

TV Products (JTA)

Operational Model

Physical Model

Functional Model

Mapping